

The CRUSHED STONE JOURNAL



NATIONAL CRUSHED STONE ASSOCIATION



The Crushed Stone Journal

Official Publication of the NATIONAL CRUSHED STONE ASSOCIATION

J. R. BOYD, Editor

NATIONAL CRUSHED STONE ASSOCIATION



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In This Issue

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AN INVESTIGATION OF THE STABILITY OF BITUMINOUS ROAD MIXES

"WHAT THE FEDERAL GOVERNMENT IS DOING"
Observations by the Mineral Aggregates Institute

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WASHINGTON, D. C.

VOLUME 10 NUMBER 2

NOVEMBER, 1935

PLANS FOR NINETEENTH ANNUAL CONVENTION NEAR COMPLETION

As previously announced in these columns, the Nineteenth Annual Convention of the National Crushed Stone Association will be held at the Hotel Jefferson, St. Louis, Missouri, January 27, 28, 29, and 30, 1936, and at the outset of this brief discussion of convention arrangements we wish to urge every crushed stone producer of the United States and Canada to attend this annual forum of the crushed stone industry. Make your plans now to be present at what is certain to be one of the most interesting and significant meetings in the history of the industry.

The decision to hold the annual meeting in St. Louis was reached only after the most careful consideration. Remembering with pleasure the highly successful conventions held there in 1924 and 1931, those charged with the responsibility of making the selection were entirely satisfied that geographical location was such as to guarantee an excellent attendance, and that the convention facilities of the Hotel Jefferson were adequate to our requirements. Assurance was also given early in the year of the whole-hearted and cordial desire of members of the Association located in the St. Louis territory to act as hosts for the 1936 meeting. In view of these circumstances, a choice has been made which should prove highly acceptable to the entire membership.

Following the practice which has proven so successful in recent years, there will be held in conjunction with the convention a Joint Exposition of the Manufacturers' Divisions of the National Crushed Stone Association and the National Sand and Gravel Association, thus again permitting the manufacturers of machinery and equipment serving the crushed stone and sand and gravel industries to enjoy an excellent opportunity at minimum expense for contacting these important markets.

Preliminary to the convention, which will open at 10:00 o'clock on Monday morning, January 27, there will be held on Sunday afternoon a meeting of the Board of Directors of the Association. At this meeting reports from the various officers will be received and consideration given to making recommendations to the incoming Board, elected during the course of the convention, concerning future activities and policies of the Association.

The convention will be formally opened at 10:00 o'clock on Monday morning, January 27, with an address by Russell Rarey, President, which will be followed by reports on business conditions in 1935 and the outlook for 1936. These reports have always enjoyed a well deserved popularity and should prove

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of outstanding interest at this convention. Through such reports we obtain an intimate knowledge of conditions and circumstances existing in all sections of the country and certainly such information has never been needed more acutely. The remainder of the morning program will be devoted to an address to be given by A. T. Goldbeck, Director of the Bureau of Engineering. Time passes so rapidly that many of you will find it hard to realize that our Bureau of Engineering was established ten years ago. Many of the accomplishments of the Bureau during that period of time have been of outstanding significance to the welfare of our industry and one of the high lights of the convention program should be Mr. Goldbeck's discussion of his vitally important work. The morning program will conclude with the appointment of the various convention committees.

At 1:00 of clock on Monday all in attendance at the convention will assemble for a "Greeting Luncheon "which will be addressed by one high in your regard for his past services to our industry.

It is planned to have the Monday afternoon session open with a paper dealing with "New Developments in Concrete Road Dosign" and negotiations are now under way to obtain one of the best qualified men in the country to discuss this important subject. An analysis of the internal affairs of the Association is then to be given by J. R. Boyd, Secretary. The remainder of the afternoon will be devoted to frank and intimate discussion by members concorning the Association and its future activities and policies. Though perhaps not the most spectacular, this part of our convention program is of the most vital interest to every crushed stone producer. To what extent we are to be able to continue the work which has been so successfully carried on in past years is a problem which no member of the Association can afford to ignore. Every member should be present and contribute his thoughts as to our course of action in the future.

At 6:00 o'clock on Monday evening there will be an informal reception for all in attendance at the convention under the auspices of the Manufacturrers' Divisions of the National Crushed Stone Association and the National Sand and Gravel Association. Following the reception there will be served a buffet supper at nominal cost. At 7:30 P. M. the Joint Exposition of the Manufacturers' Divisions of the two Associations will be formally opened, the program having been arranged to schedule no conflicts with the inspection of the Exposition on Monday evening.

The Tuesday morning session, January 28, will open with a symposium on "Stabilized Roads". Three speakers of recognized reputation are being obtained to conduct this symposium. This subject is of widespread interest throughout the crushed stone industry and should prove a valuable contribution to the program. We are particularly fortunate in having obtained to give the concluding address on Tuesday morning, H. M. Fairbank, Chief, Division of Information, United States Bureau of Fublic Roads, Washington, D.C. Mr. Fairbank is an excellent speaker and will have a message of real value for us.

of outstanding interest at this convention. Observe the obtain an intimate larger larger of conditions and directed began as extent to all sections of the country and certainly such information has never been needed more named and the continue to the morning process will be derough to an antiquest to be given by A. T. Coldbook, Idroctor of the burners of antique the first passes to repidly these many of you will find it man to remitte that the first passes are satisficable for your will find it want to remitte that our man of the burner of antique that convertible and of the burner of the surface of the standard standard and the convertible of the first passes to distribute of the standard of

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At 1:00 o'clock on Tuesday a Joint Exposition luncheon will be given for all in attendance at the conventions. Tuesday afternoon has been specifically set aside for an inspection of the Joint Exposition, no other formal events being scheduled at that time. Tuesday evening has likewise been left free for an inspection of the Exposition. In connection with the conventions of the last two or three years and due to circumstances largely beyond our control, it has not been possible to leave as much free time as might be desired for an inspection of the Joint Exposition. This has been fully recognized by those in charge of arranging the convention program and this year we believe that more opportunity is available than at any past conventions for delegates to familiarize themselves with the details of all of the exhibits. It should therefore be particularly profitable to member companies to have in attendance at St. Louis as m any of their superintendents and operating men as circumstances permit. A thorough study of the machinery and equipment which will be on display would alone make the trip profitable.

On Wednesday, January 29, the three Associations will hold joint sessions under the auspices of the Mineral Aggregates Institute. The Wednesday sessions will constitute an open forum of the three industries. The morning session will be opened by Otho M. Graves, Chairman of the Board of Governors of the Institute. Speakers who have been arranged for to date include John C. Gall, Associate Counsel, National Association of Manufacturers, who will give us a most interesting discussion of the Social Security Act and the Wagner Labor Rolations Act, and Col. Horatio B. Hackett, Assistant Administrator, Federal Emergency Administration of Public Works, Washington, D. C., who will discuss the function of Federal public works in the stimulation of industrial recovery. Negotiations are at present under way to obtain a speaker of outstanding reputation on the vitally important subject of industrial self-regulation. We are particularly fortunate in having obtained Col. Willard T. Chevalier, Vice-President of the McGraw-Hill Publishing Co., New York City. Col. Chevalier needs no introduction to our industry, having addressed us on a number of occasions in the past. The Colonel's talk is certain to be of outstanding interest and thought-provoking.

On Wednesday evening arrangements have been made for a joint dinner. The program will be featured by an address by a prominent speaker, the rest of the evening being devoted to entertainment and dancing. Members should by all means bring their wives as we are sure they will have a delightful time while in St. Louis. The program of entertainment for the ladies is now in course of preparation and details will be announced at a later date.

The concluding session of the convention will be held Thursday morning, January 30. Features of this last session will be the presentation of awards for the National Crushed Stone Association Safety Contest, followed by a technical paper of outstanding interest, arrangements concerning which are not yet completed. The remainder of the morning will be devoted to a business meeting, including a report of the Auditing Committee and Resolutions Committee, and ending with the report of the Nominating Committee and election of officers.

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Arrangements have been made with the railroads for obtaining reduced fares to St. Louis on the basis of the round trip identification certificate plan. These certificates will be mailed to all members of the industry well in advance of the meeting. Hotel reservation cards will shortly be sent out and should be immediately returned to the Hotel Jefferson in order that delegates may be assured of just the type of accommodations desired.

Many events vitally affecting the crushed stone industry have transpired since our annual convention last year and our industry should look forward with real enthusiasm to the opportunity of agair foregathering in the interests of promoting and protecting our common welfare through joint cooperative effort. Remember the dates - January 27, 28, 29 and 30, 1936 - at the Hotel Jefferson, St. Louis, Missouri.

AN INVESTIGATION OF THE STABILITY OF BITUMINOUS ROAD MIXES

By

A. T. Goldbeck, Director
Bureau of Engineering
National Crushed Stone Association

Of interest to aggregate producers is the question of the effect of shape of fragments on the stability of bituminous road mixes of the more or less open type. It is quite generally recognized that the stability of such a mix is dependent largely on the aggregate. Angular aggregates are known to give high stability, but, recently, rounded aggregates have been proposed for use in road mixes and the question arises as to the advisability of using them. If they are unsuitable in their rounded, uncrushed condition, then what percentage of crushed fragments is required to make them suitable?

To answer this question, in a tentative manner at least, a series of tests was conducted in the laboratory of the National Crushed Stone Association with the use of the circular track testing apparatus. This device, which has proven so invaluable in investigations of bituminous mixtures, has already been described. (1) Let it be recalled, however, that it consists of a trough-shaped circular track 14 feet in mean diameter. The mixtures are laid and rolled in this trough over a width of 18 inchdes and upon the compressed mixtures a rubber-tired wheel (7" X 20"), having a wheel load of 1900 lb. is operated. The movement of the mixtures under this load is an index of their stability.

Procedure

Using the circular track testing apparatus, seven different sections were constructed in which the aggregate was made up by mixing definite per-

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centages of crushed stone and rounded gravel. One of the sections was composed entirely of crushed stone and another section entirely of crushed gravel. The proportions of the different sections are given in the following table. The size of aggregate used was 1/2 to $1\frac{1}{4}$ inches, round openings, and the amount of cut-back asphalt was 3.3 per cent by weight of the aggregate.

Sec	tion Number	Per Cent S	Stone	Per Cent Gravel
	1	100		0
	2	80		20
	3	60		40
	4	40		60
	5	20		80
	6	0		100
	7	0		100 (crushed

The aggregates for each section were throughly mixed, then the cut-back asphalt, heated to 120° F., was added and mixed with the aggregate by the use of shovels. The coated aggregate was spread to a loose depth of $2\frac{1}{2}$ inches and thoroughly rolled.

Determination of the Amount of Bitumen to be Used

The per cent bitumen used in the preceding sections was arrived at as follows. A wire basket of 1/10 cu.ft. capacity was filled with the aggregate and weighed. The basket containing the aggregate was immersed in the cut-back asphalt, heated to 110° F. It was then removed from the asphalt, allowed to drain and simultaneous readings of time and weight of coated aggregate were taken. A curve was plotted with the readings, from which the proper percentage of bitumen was determined at the point where most of the dripping had taken place. The cut-back asphalt was purchased to have the following characteristics:

Cut-Back Asphalt Specifications

Flash Point (open Tag.), not less than80° F.
Specific Viscosity (Engler) 50 cc., at 122° F50 to 100
Distillation, per cent by volume
Total distillate to 4370 F., not less than10
Total distillate to 600° F., not less than20
Total distillate to 680° F., not more than35
Tests on Residue from Distillation
Penetration 77° F., 100 g., 5 sec
Ductility 77° F., not less than60
Per cent soluble in Carbon Disulphide, not less than 99.0

The above described asphalt is a rapid drying liquid product of medium viscosity which, upon exposure in thin films, reverts to an asphalt cement shortly after use.

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Constructing the Test Sections

The following procedure was used in constructing the test sections. A batch of 200 pounds of aggregate and 6.6 pounds of cut-back asphalt was mixed in a pan and spread to the required loose depth $(2\frac{1}{2}$ inches) in the track. All remaining material was weighed and the difference between the original weight and the final weight was the amount of material used for each section.

In Table I are given the essential data in connection with the construction of the test sections:

Table I - Construction Characteristics of Test Sections

Section Number	Composition of			Aggregate	Total Weight Aggregate Used (pounds)	Total Weight of A. C. Used (pounds) 3.3%	
1	100%	Stone,	0%	Gravel	173	5.7	
2		Stone,	20%	Gravel	164	5.4	
3		Stone,	40%	Gravel	168	5.6	
4		Stone,	60%	Gravel	171	5.6	
5		Stone,	80%	Gravel	187	6.2	
6		Stone,	100%	Gravel	188	6.2	
7		Stone,		Crushed Gravel	169	5.6	

(The area of each section was 9.4 sq. ft.)

Note: In Sections Nos. 5 and 6 there appeared to be an excess of asphalt.

The following values represent the weight per cubic foot for the various aggregates used, measured loose.

Section Number	Pounds
1	88.0
2	90.2
3	91.4
4	93.5
5	94.5
6	96.3
7	92.3

The limestone used had a specific gravity of 2.74 and the gravel, 2.61.

After the road was allowed to cure it was rolled and again cured. The roller had a weight of 200 pounds per inch of width.

Testing the Sections

First Tost

The sections were subjected to the action of a rubber-tired whoel equipped with a 7 in. X 20 in. tire loaded to 1900 pounds. After 120 passes of

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this tire, there was appreciable rutting and change in cross-section. Rutting under the wheel is accompanied by upward displacement of the bituminous mixture thus forming a ridge immediately adjacent to the path of the wheel. Again the tire was operated in the same track and after 309 total passes, measurements were taken, for in some sections the rutting was rather deep. The average displacement of the various sections was as follows.

Displacement After 309 Passes of Loaded Wheel

Section Number		mposition	of	Aggregate	•	Depth of Rutting (Inches)	Height of Ridge (Inches)
1	100%	Stone,	0%	Gravel		0.20	0.45
2	80%	Stone,	20%	Gravel		0.13	0.42
3		Stone,	40%	Gravel		0.22	0.45
4		Stone,	60%	Gravel		0.31	0.65
5		Stone,	80%	Gravel		0.50	1.14
6			100%	Gravel	,	0.70	1.21
7			100%	Crushed	Gravel		0.56

It is obvious that the angularity of the crushed stone fragments produced increased stability. The least stable mix was made of rounded gravel and those mixes containing either 100 per cent stone or 80 per cent stone were most stable. One hundred por cent crushed gravel is not the equal of 100 per cent crushed stone and it should not be as stable because even in 100 per cent crushed gravel, there are many rounded faces.

Second Test

After this first test the road was re-rolled and 12.7 pounds of screenings were rolled into the surface of each section. The screenings had the following gradation:

Sieve Number	Total Passing			
4	61.3			
8	17.1			
16	14.0			
30	1.5			
50	1.4			
100	1.3			
Passing 100	3.4			
To	tal100.0			

The loaded tire was then run 4000 passes on the inside portion of the roadway and measurements were made of the rutting. It was noted this time that the rutting was not nearly as severe as in the first test, thus indicating the extremely beneficial effect of the addition of the screenings to the surface.

the tire, there was appropriate and dumps in cross-rection. Butting under the sheel is accompanied by upward displacement of the intendrons excluse that forming a ride increased at a placement to the principal sheet. Arein the three was operated in the same brook and after 508 total passes, quantuments were taken, for in some modilions the resting was retired down. The average that lacement of the various sections was as follows.

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Second Test

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Data from this second test are shown in the following table:

Rutting After 4000 Passes of Loaded Wheel

Section Number	Cor	mposition	n of .	Aggrega te	Depth of Rutting (Inches)
1	100%	Stone,	0%	Gravel	0.60
2		Stone,	20%	Gravel	0.60
3	60%	Stone,	40%	Gravel	0.67
4		Stone,	60%	Gravel	0.75
5		Stone,	80%	Gravel	0.80
G		Stone,	100%	Gravel	0.84
7.		Stone,		Crushed Grav	el 0.55

As in the first test, the second test shows that the 100 per cent rounded gravel is the least stable of all the sections and the most stable sections are those containing the highest percentages of crushed fragments. There is little difference in stability between 100 per cent crushed gravel, 100 per cent crushed stone, and 80 per cent crushed stone-20 per cent gravel combination. There is a noticeable falling off in stability in the 60 per cent stone-40 per cent gravel combination. The outstanding point to be noted about the second test is the fact that although a few hundred passes of the wheel were required to almost destroy the sections in the first test and make for great instability when there were no screenings in the surface, the addition of screenings made it possible to operate during 4000 passes with not as much destruction as occurred before. It would seem that this indicates the greatly beneficial effects to be obtained from filling the surface voids with screenings.

Third Test

After the second test was completed, the track was again rolled into place and the weighted rubber-tired wheel was rolled 6000 times over the outer portion of the roadway with the following results:

Rutting After 6000 Passes of Loaded Wheel

Section Number	Composition of	Aggregate	Depth of Rutting (Inches)
1	100% Stone, 0%	Gravel	0.49
2		Gravel	0.65
3		Gravel	0.82
4		Gravel	0.75
5		Gravel	1.12
6	0% Stone, 100%	Gravel	1.14
7		Crushed Gravel	0.76

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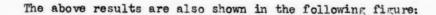
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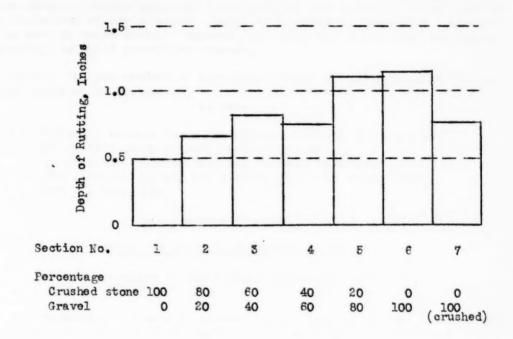
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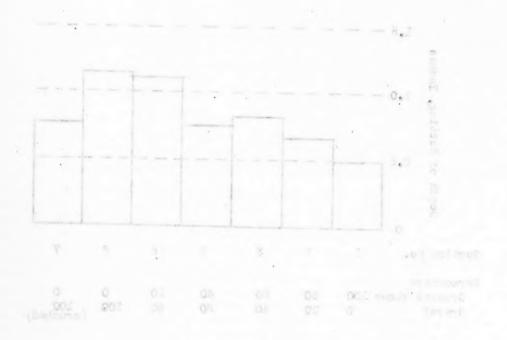


It will be noted that the best results were obtained with 100 per cent stone. The section containing 100 per cent crushed gravel seems to lie midway between the sections containing 60 and 80 per cent of stone respectively. The least stable section of the lot was the rounded gravel section and the section containing only 20 per cent crushed stone and 80 per cent rounded gravel was the next least stable.

Indications from the Test

These tests indicate very strongly that angularity of aggregates is highly desirable for mixed-in-place construction of the open type. It was difficult to roll the section containing only the rounded fragments. The crushed fragments added to the rounded gravel were crushed stone fragments, all of whose faces resulted from the crushing operation. This is not true of most crushed gravels which usually are composed of fragments having only one face resulting from the crushing. It is possible that different stones and





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different gravels will behave in a different manner and it will not be fair to draw sweeping conclusions from these results, but rather to accept them as being indicative of the relative stability of mixtures made with materials such as used in these tests. However, the stone and gravel used are typical of materials in their respective classes.

Again, let the extremely beneficial effect of the screenings when used as choke material be emphasized.

Note (1) "National Crushed Stone Association Circular Testing Track",
The Crushed Stone Journal, May-June, 1932.
"A Laboratory Service Test for Pavement Materials",
1934 American Society for Testing Materials Proceedings,
Part II, page 608.

"WHAT THE FEDERAL COVERNMENT IS DOING"

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Observations by the Mineral Aggregates Institute

The ceremonial procedure observed by the Congress in the consideration and approval of bills is based partly upon tradition and partly upon statutory requirements, as was pointed out in an interesting article by H. H. Smith of the Washington staff of the New York Times. It may facilitate a readic runderstanding of press dispatches upon the activities of Congress if we describe the process employed by the Congress in approving bills and in submitting them to the President for signature.

If a bill has passed either the Senate or the House of Representatives, it is "engrossed". A House Bill is engrossed by printing it on heavy blue paper, in large type, and after it has been signed by the clerk of the House. This print is then delivered to the Senate and represents official advice that the House has adopted the legislation. Bills originally passing the Senate are engrossed on white paper, printed in large type, and signed by the secretary of the Senate.

When both houses have taken action upon a bill or a joint resolution, it is then "enrolled" by being printed on so-called "parchment" but actually linen vellum paper. Small 8-point type is then used. All printer's leads are removed and the printed lines are so close together that nothing can be written between them. Only one such parchment print is made. This is the original that goes to the President for signature. It bears the signature of the Speaker of the House and the Vice-President. On its back it is signed by the clerk of the House if the bill originated there, or by the secretary of the Senate if the bill was launched on its legislative career in the Upper Chamber.

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Under the Constitution the President has 10 days in which to act upon the bill after it has been presented to him. If he approves the measure, he signs it, and transmits this information by messenger to Congress. In the cast of revenue and tariff bills, the hour of presidential approval is indicated.

The enrolled parchment print of the bill, after being signed by the President, is delivered to the Secretary of State, who designates it as "public" or "private", dependent upon its purpose, and gives it a law number. The original bill as signed by the President is preserved in the Division of Research and Publiciation in the State Department. All laws ever enacted by Congress have been so preserved in the State Department from the beginning of this Government.

When the original parchment print is sent to the President it is accompanied by four duplicate copies printed on paper from the same type. These copies serve various purposes. One copy is sent to the Treasury Department. Another goes to the Government Printing Office, and from this the so-called "slip prints" and "law prints" of every act are made. These slip prints are run off in large quantities and sent to the Senate and House document rooms for distribution to members of Congress, Federal officials and the public in general.

Besides the parchment original filed in the State Department and these slip prints for the document rooms, there are at least three other forms in which acts are printed for publication. The laws are assembled chronologically, by number and date of Presidential signature, by the State Department for binding into volumes known as "Sessions Laws." These volumes, containing the acts of a particular session, are bound in green paper.

The State Department likewise assembles the acts of each session to be printed and bound in full buckram as "The Statutes at Large." Finally, after a lapse of some time, the laws of each session are merged into the official publication known as the "Code" of laws. This is done under the supervision of the House Committee on Revision of Laws.

If the President does not desire to approve a bill, and, on the other hand, is unwilling to veto it, he may, by not returning it to Congress within ten days, permit it to become a law without his approval. The Secretary of State makes a notation on the bill as to the date on which it was received by the President and to the effect that not having been returned by him to the House within the time prescribed by the Constitution, it has become a law without his approval. But if Congress adjourns before the ten-day period ends, the bill fails to become a law. This is what is known as a "pocket veto."

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Labor Act Regulations

The new chairman of the National Labor Relations Board, Mr. Jos. W. Madden, has stated officially that company-dominated unions would be definitely frowned upon in rulings under the Wagner-Connery Act. He also advised that when a majority of workers in a plant or other unit of an industry decides in favor of a particular set of representatives to serve in dealings with employers, those representatives could bargain for all workers. The significance of this policy will be quickly appreciated, since it seems to settle definitely the two questions which excited the most discussion in the efforts of the NRA to administer Section 7(a) of the National Industrial Recovery Act.

The unfair labor practices prohibited under the bill have been enumerated and discussed in previous reports. Under Section 10 (a) the Labor Relations Board is empowered "to prevent any person from engaging in any unfair labor practice affecting commerce." The expression "any person" does not empower the Board to apply the prohibitions of the law against the officers and agents of labor organizations. All of its penalties and punishments are visited upon the employer.

The term "any unfair labor practice affecting commerce" does not lend itself to definition. The Act defines the term to mean "in commerce, or burdening or obstructing commerce or the free flow of commerce, or having led or tending to lead to a labor dispute burdening or obstructing commerce or the free flow of commerce." It is clear from the decisions of the Supreme Court in many cases that an unfair labor practice by an employer engaged in manufacturing or producing can be construed to affect commerce only when the effect is direct and substantial. In the vast majority of industrial operations, there is no such direct and substantial relation.

The Court has frequently registered its impatience with efforts of Congress by adroit phraseology to exceed the Constitutional limitations of the legislative branch of the Federal Government. The Wagner-Connery Act, in a structural sense, is comparable to a law passed by Congress in 1916 which attempted to abolish child labor by excluding from interstate commerce products in whose manufacture child labor had been used. This act was held to be unconstitutional by the Supreme Court in June 1918, on the ground that it was an unwarranted attempt to use the Federal power over interstate commerce to control matters properly belonging to the states. The Court has been consistent in its position that manufacturing and mining are not commerce within the meaning of the commerce clause of the Constitution, "even though the product obtained is intended to be and in fact is immediately shipped in such commerce."

While the National Labor Relations Board has been handicapped in its organization by the failure of the deficiency appropriation bill, this situation has not affected the presentation of complaints to the Board. It is already confronted with the necessity of making important decisions, and despite its known desire to avoid Court review of its work which will throw open

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the subject of the constitutionality of the measure, that occasion seems to be approaching quickly. In the meantime, we are advised that some members of our industries are beginning to feel the onslaught of labor problems. Even though our own particular business on the whole has not been characterized in the past by difficulties of labor organization, it is unquestionably true that the Wagner-Connery Act has resulted in intensification and aggravation of the labor problem; but unless and until the Supreme Court specifically denies to Congress the right to enact statutes providing for collective bargaining in manufacturing and production operations, it may safely be assumed that this principle is permanent legislation. It is this consideration which prompts us to repeat again our offer to be of service to members of the industries in the handling of specific problems arising under the Wagner-Connery Act.

Important Principles of New Tax Bill

In previous reports the Institute has undertaken to analyze and abstract the revenue law of 1935. Correspondence on this subject seems to suggest the desirability of concentrating attention upon certain provisions of the bill which will have a direct or indirect influence upon every business organization. Any study of this bill should not overlook the elemental consideration that, for the first time in our history, a tax bill has been adopted by the Congress without the primary motivation of production of revenue. Openly and avowedly, the bill has a social purpose, mainly expressed in the graduated income tax upon corporations. This represents a use of the taxing power to eliminate bigness as such in business.

The old corporation income tax of $13\frac{3}{4}$ per cent which was arbitrarily applied irrespective of the size of corporation income, has been replaced by a sliding scale of taxes which is claimed to have the effect of reducing the taxes of a majority of the corporations in the United States. Corporation incomes under \$2,000 will pay a tax of $12\frac{1}{2}$ per cent; incomes between \$2,000 and \$15,000 will be assessed on the basis of 13 per cent; incomes between \$15,000 and \$40,000 on the basis of 14 per cent; and incomes over \$40,000 will pay a tax of 15 per cent.

Excess Profits Taxes

Under the new tax law, there will be an excess profits tax of 6 per cent on net incomes of over 10 per cent and not over 15 per cent of the adjusted declared value of capital stock; 12 per cent on net income of over 15 per cent of the adjusted declared value of capital stock. In computing net income subject to excess profits tax, a deduction is allowed of corporation income tax for the same year. For the year ending June 30, 1936, every corporation is allowed to make a new declaration of the adjusted value of its capital stock. New excess profits taxes take effect for taxable years ending after June 30, 1936.

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Capital Stock Tax

Under the 1935 revenue law, the capital stock tax rate will be \$1.40 for \$1,000 of adjusted declared value of capital stock. The new rate applies for each year ending June 30, beginning with the year ending June 30, 1936.

Other Provisions

Under the new law 10 per cent of inter-corporate dividends are now taxable at the regular corporation tax rates. This takes effect for taxable years beginning after December 31, 1935. There may be deductions for gifts or contributions for charitable, religious, scientific, literary or educational purposes, up to a total of not over 5 per cent of net incomes as computed prior to listing of the contributions. Prior to the new law such deductions were allowed only if a direct business benefit resulted.

The old law imposed a penalty of 25 per cent for failure to file returns on time. Under the new law the penalty is 5 per cent if failure does not extend over 30 days; an additional 5 per cent for each 30 days or fraction thereof, with a maximum of 25 per cent. The old law provided 1 per cent a month interest rate on delinquent Federal taxes. This has been revised to a rate of 6 per cent per annum.

To a very large degree, the import of the revenue law of 1935 will not be adequately understood until the rules and regulations of the Commissioner of the Internal Revenue are promulgated. After they become available they will be referred to in Institute reports.

Work Reliof Regulations

It is announced by Thos. H. MacDonald, Chief of the U. S. Bureau of Public Roads, that Amendment No. 2 to the Rules and Regulations for carrying out those provisions of the Emergency Relief Appropriation Act of 1935 that relate to the construction of public highways and the elimination of hazards to life at railroad grade crossings, approved Soptember 12, 1935, changes Section 10 of both of these regulations to read as follows:

Contracts and Construction. "Section 10. All contracts for the construction of Works Program highway projects shall be entered into by the State highway department, and no contract for any such project, or part thereof, shall be entered into or award therefor made by any State without prior concurrence in such action by the District Engineer of the Bureau of Public Roads.

"Approval will not be given to any procedure or requirement designed to prevent the award of contracts to qualified contractors nonresident of the State in which the work is located. All contracts shall contain special provisions prescribed by the Bureau of Public Roads to give effect to requirements respecting wages, hours of work, conditions of employment, etc., as prescribed by Executive Orders and contemplated by these rules and regulations affecting such work."

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This amendment deletes the paragraph respecting compliance with requirements of future legislation concerning wage rates, hours of employment, etc. The second paragraph under Sec. VI - General Requirements - of the Special Provisions should accordingly be eliminated.

The \$4,800,000,000 Fund

Many have inquired as to the exact use made of the \$4,800,000,000 fund authorized by the last Congress in the Emergency Appropriation Act of 1935. Detailed information on this subject cannot be obtained, but in the following table reference is made to present allotments and prospective commitments:

Direct Relief	
Low-cost Housing	214,000,000
for heavy construction	74,000,000
Department of Interior	100,000,000
Highways and grade crossings	400,000,000
Resettlement Administration	7,000,000
Flood control	150,000,000
Navy Department	17,000,000
Treasury Department	15,000,000
CCC Camps	600,000,000
WPA Jobs on local projects	600,000,000
WPA Jobs which are ready but details not approved	500,000,000

Approximately \$1,000,000,000 remains undistributed. It is this sum which precipitated the recent controversy between Mr. Ickes and Mr. Hopkins, the former contending for its allocation to permanent improvements, and the latter asking for quick expenditures on made work. Mr. Hopkins apparently triumphed.

QUOTATIONS DESIRED ON STONE SUITABLE FOR MOSAIC WORK

We recently received the following inquiry:

"I wonder whether some members of your Association are in position to supply me with crushed marble or other aggregates of a similar nature and of various sizes and colours for mosaic work.

"If that should turn out to be the case, I would greatly appreciate it if you would bring my name and address before those interested in the line, asking them to send me samples and quotations."

Any member company in a position to furnish the desired material should write direct to

Albert Landau P. O. Box 837, Tel-Aviv, Palestine